

ABSTRACT

LOW FREQUENCY SELF-CALIBRATION OF
A PLL WITH MULTIPHASE CLOCKS

A Phase-Locked Loop with multiphase clocks is provided. The Phase-Locked Loop includes a main loop, a calibration loop, and Control Logic. The main loop includes, coupled in series, a Phase Frequency Detector, a Main Charge Pump, a Main Loop Filter, a Multi-Phase Voltage Controlled Oscillator and a Phase-switching Fractional Divider. The calibration loop is coupled to the Phase Frequency Detector, and comprises a Calibration Charge Pump, a Multiplexer and Y Calibration Loop Filters, with Y being an integer. The Control Logic controls the Phase-Switching Fractional Divider and the Multiplexer. A Reference Frequency Signal is coupled to the Phase Frequency Detector and a Calibration Signal is coupled to the calibration loop. The main loop further comprises a Phase-adjusting Block coupled to a Demultiplexer. The Phase-adjusting Block is arranged so as to receive at least one correction signal from the calibration loop.

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